



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/592,932

09/04/2008

Ingo Udo Borchers

056226.58024US

5766

23911 7590 03/11/2010  
CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT

PAPER NUMBER

2832

MAIL DATE

DELIVERY MODE

03/11/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/592,932	<b>Applicant(s)</b> BORCHERS ET AL.	
	<b>Examiner</b> JEREMY LUKS	<b>Art Unit</b> 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 4-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch (4,150,732) in view of Wirt (3,887,031).

With respect to Claim 4, Hoch teaches an acoustically absorbent lining for a hot gas flow channel of an arrangement for abatement of noise generated by a turbofan drive (Col. 1, Lines 7-19) comprising: four sound guides (Figure 1, #5a) extending into each of a plurality of adjacent cavities (4a) (Col. 4, Lines 9-13 – note that the amount of resonant cavities is variable, thus teaching a plurality of cavities). Hoch fails to teach wherein the sound guides are horn shaped, and a perforated cover plate to which all of the four horns are attached at respective mouths thereof, wherein the cover plate forms a wall of the hot gas flow channel. Wirt teaches a plurality of resonant cavities (Figure 1, spaces formed by partitions 2 and 3) having a horn shaped sound guide (5), and a perforated cover plate (11) to which all of the four horns (5), when used in combination, are attached at respective mouths (7) thereof, wherein the cover plate (1) forms a wall of the hot gas flow channel when used in combination. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Hoch, with the apparatus of Wirt to improve absorption of the resonator cavity at both

Art Unit: 2832

high and low frequencies, by heavily dampening resonance due to a permeable cover across the mouth of the horns.

With respect to Claim 5, It would have been an obvious design choice to provide wherein the cavities, measured in directions of the horns, are 34 mm deep, wherein the horns are 23 mm long, wherein a diameter of the mouth is 23 mm, and wherein a diameter of a throat of the horn is 7 mm, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). Further, Wirt teaches that changing the geometric parameters to maximize the performance of the device.

With respect to Claims 6 and 7, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wherein the cover plate has a porosity which amounts to at least 20%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working range involves only routine skill in the art. In re Aller, 105 USPQ 233. Further, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the Art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It is noted that Wirt suggest that the resistance, (i.e. porosity) of the facing sheet is one of several parameters selected to maximize performance of the device.

With respect to Claims 8-11, Wirt teaches wherein said cavities (Figure 1, spaces formed by partitions 2 and 3) are arranged directly side by side, and each cavity

Art Unit: 2832

(spaces formed by partitions 2 and 3) is separated from adjacent cavities (spaces formed by partitions 2 and 3) by common side walls (2, 3).

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 4-11 have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers the obvious combination of Hoch and Wirt to teach all of the limitations as claimed by Applicant.

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2832

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY LUKS whose telephone number is (571)272-2707. The examiner can normally be reached on Monday-Friday, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeremy Luks/  
Examiner, Art Unit 2832

/Jeffrey Donels/  
Primary Examiner, Art Unit 2832